Suggestions to W3C Draft on Automotive Working Group Charter

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**Suggestions:**

The working group aims to develop APIs related to Vehicle Information Specification (VIS) and Vehicle Data Specification[[1]](#footnote-1). Assuming that different data from in-built sensors will be exposed through Vehicle Data Specification (VDS) API, it must allow the following –

1. **Local discovery** of vehicular sensors, their types, capabilities, associated units and measurements. This is important since the sensors will vary from vehicle to vehicle. This process could be performed once and the results could be cached into the API or mobile application. The implementation can be done using JSON which is supported in JavaScript. A similar discovery concept for sensors can be found in [1, 2] and can be extended to cover the aspects briefed here.
2. **For privacy-aware information exchange** through the mentioned APIs, each vehicle can be given a pseudo-id from the network/geographical zone.
3. **Recommendation to OEMs** about interoperability issues -
   1. For example, this group should recommend a uniform way to describe vehicular sensors in terms of name, ID, type, unit, measurement etc. Such description can be done using CoRE Link and implemented using JSON which is supported in JavaScript [1, 2, 3]. It will complement the efforts in VDS API as it will supply the sensor descriptions also.
4. **Appropriate message format** should be defined and implemented to support the vehicle information and data exchange. This message format is necessary to represent the information (vehicle brand, model, year, fuel type etc.) to be exposed by the mentioned APIs.
5. **User requirements** should be identified which will trigger the access to the APIs.

**References:**

[1] Datta, S.K.; Bonnet, C.; Nikaein, N., "An IoT gateway centric architecture to provide novel M2M services," Internet of Things (WF-IoT), 2014 IEEE World Forum on , vol., no., pp.514,519, 6-8 March 2014. doi: 10.1109/WF-IoT.2014.6803221

[2] Datta, S.K.; Bonnet, C.; Nikaein, N., "CCT: Connect and Control Things: A novel mobile application to manage M2M devices and endpoints," Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP), 2014 IEEE Ninth International Conference on , vol., no., pp.1,6, 21-24 April 2014. doi: 10.1109/ISSNIP.2014.6827627

[3] Datta, S.K.; Bonnet, C., “Smart M2M gateway based architecture for M2M device and endpoint management”, Internet of Things 2014 (iThings 2014), IEEE International Conference on, vol., no., 1-3 September 2014.

1. http://www.w3.org/2014/automotive/charter-draft.html [↑](#footnote-ref-1)